0.a. Goal

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

0.b. Target

Target 9.2: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries

0.c. Indicator

Indicator 9.2.2: Manufacturing employment as a proportion of total employment

0.e. Metadata update

January 2021

0.f. Related indicators

8.2.1

0.g. International organisations(s) responsible for global monitoring

United Nations Industrial Development Organization (UNIDO)

(with the collaboration of the International Labour Organization – ILO)

1.a. Organisation

United Nations Industrial Development Organization (UNIDO)

(with the collaboration of the International Labour Organization – ILO)

2.a. Definition and concepts

Definitions:

This indicator presents the share of manufacturing employment in total employment.

Concepts:

Employment comprises all persons of working age who during a short reference period (one week), were engaged in any activity to produce goods or provide services for pay or profit.

The working-age population is usually defined as all persons aged 15 and above.

For further clarification, see: Resolution concerning statistics of work, employment and labour underutilization (2013), available from http://ilo.org/global/statistics-and-databases/standards-and-guidelines/resolutions-adopted-by-international-conferences-of-labour-statisticians/WCMS_230304/lang--en/index.htm.

No distinction is made between persons employed full time and those working less than full time.

The manufacturing sector is defined according to the International Standard Industrial Classification of all Economic Activities (ISIC) revision 4 (2008, the latest) or revision 3 (1990). It refers to industries belonging to sector C in revision 4 or sector D in revision 3.

2.b. Unit of measure

Percentage

2.c. Classifications

International Standard Industrial Classification of all Economic Activities (ISIC) Revision 4

International Standard Industrial Classification of all Economic Activities (ISIC) Revision 3

3.a. Data sources

The preferred official national data source for this indicator is a household-based labour force survey.

In the absence of a labour force survey, a population census and/or other type of household survey with an appropriate employment module may also be used to obtain the required data.

Where no household survey exists, establishment surveys or some types of administrative records may be used to derive the required data, keeping into account the limitations of these sources in their coverage. Specifically, these sources may exclude some types of establishments, establishments of certain sizes, some economic activities or some geographical areas.

3.b. Data collection method

The ILO Department of Statistics processes national household survey microdatasets in line with internationally-agreed indicator concepts and definitions set forth by the International Conference of Labour Statisticians. For data that could not be obtained through this processing or directly from government websites, the ILO sends out an annual ILOSTAT questionnaire to all relevant agencies within each country (national statistical office, labour ministry, etc.) requesting the latest annual data and any revisions on numerous labour market topics and indicators, including many SDG indicators.

UNIDO employment data are collected using General Industrial Statistics Questionnaire which is filled by NSOs and submitted to UNIDO annually.

3.c. Data collection calendar

Continuous

3.d. Data release calendar

Continuous

3.e. Data providers

Mainly national statistical offices, and in some cases labour ministries or other related agencies, at the country-level. In some cases, regional or international statistical offices can also act as data providers.

3.f. Data compilers

United Nations Industrial Development Organization (UNIDO) and International Labour Organization (ILO)

3.g. Institutional mandate

The ILO is the UN focal point for labour statistics. It sets international standards for labour statistics through the International Conference of Labour Statisticians. It also compiles and produces labour statistics with the goal of disseminating internationally-comparable datasets, and provides technical assistance and training to ILO member States to support their efforts to produce high quality labour market data.

UNIDO, as the specialized UN agency on industrial development, has the international mandate for collecting, producing and disseminating internationally comparable industrial statistics. UNIDO’s mandate covers (i) the maintenance and updating of international industrial statistics databases; (ii) methodological and analytical products based on statistical research and experience of maintaining internationally comparable statistics; (iii) contributions to the development and implementation of international statistical standards and methodology; and (iv) technical cooperation services to countries in the field of industrial statistics. With the repositioning of UNIDO as the focal agency for inclusive and sustainable industrial development (ISID), its statistical mandate was expanded to cover all dimensions of industrial development, including its inclusiveness and environmental sustainability.

4.a. Rationale

This indicator conveys the contribution of manufacturing in total employment. It measures the ability of the manufacturing sector to absorb surplus labour from agricultural and other traditional sectors. However, in developed countries an opposite trend is expected where emphasis has shifted to reduction in labor in manufacturing as part of cost-cutting measures, to promote more capital-intensive industries.

4.b. Comment and limitations

The characteristics of the data source impact the international comparability of the data, especially in cases where the coverage of the source is less than comprehensive (either in terms of country territory or economic activities). In the absence of a labour force survey (the preferred source of data for this indicator), some countries may use an establishment survey to derive this indicator, but these usually have a minimum establishement size cut-off point and small units which are not officially registered (whether in manufacturing or not) would thus not be included in the survey. Consequently, employment data may be underestimated. Discrepancies can also be caused by differences in the definition of employment or the working–age population.

4.c. Method of computation

Computation Method:

$$\frac{\text{Total employment in manufacturing activities}}{\text{Total employment in all economic activities}} * 100$$

4.d. Validation

The ILO engages in annual consultations with member States through the ILOSTAT questionnaire and related Statistics Reporting System (StaRS). National data providers receive a link to the portal where they can review all national SDG data available on ILOSTAT.

4.e. Adjustments

Through the ILO Harmonized Microdata initiative, the ILO strives to produce internationally comparable labour statistics based on the indicator concepts and definitions adopted by the International Conference of Labour Statisticians.

4.f. Treatment of missing values (i) at country level and (ii) at regional level

• At country level

Multivariate regression and cross-validation techniques are used to impute missing values at the country level. The additional variables used for the imputation include a range of indicators, including labour market and economic data. However, the imputed missing country values are only used to calculate the global and regional estimates; they are not used for international reporting on the SDG indicators by the ILO. For further information on the estimates, please refer to the ILO modelled estimates methodological overview, available at https://ilostat.ilo.org/resources/concepts-and-definitions/ilo-modelled-estimates/.

• At regional and global levels

The aggregates are derived from the ILO modelled estimates that are used to produce global and regional estimates of, amongst others, employment by economic activity. These models use multivariate regression and cross-validation techniques to impute missing values at the country level, which are then aggregated to produce regional and global estimates. The regional and global shares of

employment in manufacturing are obtained by first adding up, across countries, the numerator and denominator of the formula that defines the manufacturing employment as a proportion of total employment - outlined above. Once both magnitudes are produced at the desired level of aggregation, the ratio between the two is used to compute the share for each regional grouping and the global level. Notice that this direct aggregation method can be used due to the imputation of missing observations. For further information on the estimates, please refer to the ILO modelled estimates methodological overview, available at https://ilostat.ilo.org/resources/concepts-and-definitions/ilo-modelled-estimates/.

4.g. Regional aggregations

The global and regional aggregates are calculated after direct summation of country values within country groups.

4.j. Quality assurance

Data consistency and quality checks are regularly conducted for validation of the data before dissemination in the ILOSTAT database.

5. Data availability and disaggregation

Data availability:

Data is available in ILOSTAT for 177 countries and territories.

Time series:

Data for this indicator is available from 2000 in the UN Global SDG Database, but longer time series are available in ILOSTAT.

Disaggregation:

This indicator can be disaggregated by sex, occupation, age, region and others.

6. Comparability/deviation from international standards

Sources of discrepancies:

The difference may arise due to: a) discrepancies in data sources; b) ISIC Revision used by a country; c) informal employment; d) coverage of data source (geographical coverage, economic activities covered, types of establishments covered, etc.); e) working-age population definition..

7. References and Documentation

URL:

https://ilostat.ilo.org/

https://ilostat.ilo.org/resources/methods/description-employment-by-economic-activity/

www.unido.org/statistics

https://stat.unido.org/

References:

- ILO Guidebook - Decent Work and the Sustainable Development Goals: A Guidebook on SDG Labour Market Indicators (https://www.ilo.org/stat/Publications/WCMS_647109/lang--en/index.htm)
- Decent Work Indicators Manual: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_223121.pdf
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- ILOSTAT database: https://ilostat.ilo.org
- ILOSTAT Metadata – Indicator Descriptions (https://ilostat.ilo.org/resources/methods/description-employment-by-economic-activity/)
- International Standard Industrial Classification of All Economic Activities 2008 (https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf)